

Date: Tuesday, 10/23/2007 3:10:33 PM  
 User: Kim Johnston

## Process Sheet

Customer : CU-DAR001 Dart Helicopters Services	Drawing Name : TUBE ASSEMBLY	
Job Number : 35324		
Estimate Number : 11489		
P.O. Number :	Part Number : D2003027	<i>MAKE PER TEMPLATE 07.10.24</i>
This Issue : 10/23/2007 S.O. No. :	Drawing Number : <del>UNDER REVIEW</del>	
Prsht Rev. : NC	Project Number : N/A	
First Issue : 1 / Type : SMALL /MED FAB	Drawing Revision : B	
Previous Run : 28130	Material :	
Written By :	Due Date : 11/15/2007	Qty: 5 Um: Each
Checked & Approved By : <i>07.10.23</i>		
Comment : Est Rev A 05.12.15 New Issue AP		

## Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
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1.0	M6061T6T0500W035	6061-T6 Tube .500 x.035W
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Comment: Qty.: 0.6999 f(s)/Unit Total : 3.4997 f(s)  
 Material: 6061-T6 tubing Ø 0.500" x 0.035" wall  
 (M6061T6T0.500W.035)  
 Batch: *M4692*

*FF 07-10-29 (5)*

2.0	SMALL FAB 1	SMALL & MEDIUM FAB RESOURCE 1
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Comment: SMALL & MEDIUM FAB RESOURCE 1  
 Form tube as per template D2003-027

*FF 07-10-30 (5)*

3.0	QC5	INSPECT WORK TO CURRENT STEP
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Comment: INSPECT WORK TO CURRENT STEP

*5 07/10/30 (X5) (count)*

4.0	M26506	Firesleeve-crkl .375IDia
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Comment: Qty.: 0.6343 f(s)/Unit Total : 3.1715 f(s)  
 Firesleeve-crkl .500IDia

Qty	Part Number	Description	Batch
1	M2650-6	Heat Sleeve	<i>M103097</i>

*FF 07-10-31 (5)*

5.0	MS208198D	Sleeve
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Comment: Qty.: 2.1000 Each(s)/Unit Total : 10.5000 Each(s)  
 Pick:

Qty	Part Number	Description	Batch
2	MS20819-8D	Sleeve	<i>M19099 (X5) / M13230 (X5)</i>

*FF 07-10-31 (5)*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Tuesday, 10/23/2007 3:10:33 PM  
User: Kim Johnston

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: TUBE ASSEMBLY

Job Number: 35324

Part Number: D2003027

Job Number:



Seq. #:

Machine Or Operation:

Description:

6.0

AN8188D

Nut



Comment: Qty.: 2.0000 Each(s)/Unit Total: 10.0000 Each(s)

Pick:

X

Qty Part Number Description Batch

2 AN818-8D Nut

M103154

FF 07-10-31

(5)

7.0

SMALL FAB 1

SMALL & MEDIUM FAB RESOURCE 1



Comment: SMALL & MEDIUM FAB RESOURCE 1

Cut tube 7.38" long as per Dwg D2003

Cut Heat sleeve 7.25" long as per Dwg D2003

Install Red decal and heat shrink

Assemble as per Dwg D2003

MAKE PER TEMPLATE : CONFIRM THE FOLLOWING  
DIMENSION TO ENG. ?

CUT LENGTH  
= 7.38"  
(07.10.24)

07.10.24

\* CUT LENGTH OF TUBE = 8.25"  
NOTE: DIMENSION SHOWN FOR  
REFERENCE ONLY.

FF 07-10-31

(5)

8.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

07/10/31 (X5) counts

9.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: STS

(X5)

07/11/01

AS

10.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

07.11.01

Job Completion



07.11.01

**Dart Aerospace Ltd**

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



DESIGN <i>JE</i>	DRAWN BY <i>SP</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>JE</i>	APPROVED <i>SP</i>	DRAWING NO. D2003	REV. 8 SHEET 1 OF 2
DATE 99.06.08		TITLE 206 CABIN HEATER TUBE ASSEMBLIES NTS	
A	90.04.09	NEW ISSUE	
B	99.06.08	UPDATE PER TEMPLATES; ADD P/N'S; 0.025 TUBING NOW 0.035 (TSR1049)	

RELEASED  
49.06.08 *KE*

UNDER REVIEW

06.03.21 CB

*some flat  
length wrong*

HAVE PER TEMPLATE

*150710.24*

P/N	TEMPLATE	HEATSLEEVE LENGTH <sup>1</sup>	CUT LENGTH OF TUBE <sup>2</sup>	MS20819-8J SLEEVE	AN818-8J NUT	MS20819-8D SLEEVE	AN818-8D NUT	MS20819-6D SLEEVE	AN818-6D NUT	DESC.	MATERIAL <sup>4/5/7</sup>	VENDOR OR SPEC
D2003-001	T2003-001	5.2	6.00					2	2	TUBE ASS'Y	6061-T6 0.375 OD x 0.035 W	WWW-T-700/6
D2003-003	T2003-003	7.3	8.12					2	2	TUBE ASS'Y	6061-T6 0.375 OD x 0.035 W	WWW-T-700/6
D2003-005	T2003-005	9.8	10.62					2	2	TUBE ASS'Y	6061-T6 0.375 OD x 0.035 W	WWW-T-700/6
D2003-007	T2003-007	20.0	19.63					2	2	TUBE ASS'Y	6061-T6 0.375 OD x 0.035 W	WWW-T-700/6
D2003-009	T2003-009	12.38	12.44					2	2	TUBE ASS'Y	6061-T6 0.375 OD x 0.035 W	WWW-T-700/6
D2003-011	T2003-011	33.31	32.38					2	2	TUBE ASS'Y	6061-T6 0.375 OD x 0.035 W	WWW-T-700/6
D2003-013	T2003-013	12.7	13.54					2	2	TUBE ASS'Y	6061-T6 0.375 OD x 0.035 W	WWW-T-700/6
D2003-015	T2003-015	17.2	18.00					2	2	TUBE ASS'Y	6061-T6 0.375 OD x 0.035 W	WWW-T-700/6
D2003-017	T2003-017	17.0	16.25					2	2	TUBE ASS'Y	6061-T6 0.375 OD x 0.035 W	WWW-T-700/6
D2003-019	T2003-019	9.8	10.62			2	2			TUBE ASS'Y	6061-T6 0.500 OD x 0.035 W	WWW-T-700/6
D2003-021	T2003-021	N/A	2.25			2	2			TUBE ASS'Y	6061-T6 0.500 OD x 0.035 W	WWW-T-700/6
D2003-023	T2003-023	4.5	5.33			2	2			TUBE ASS'Y	6061-T6 0.500 OD x 0.035 W	WWW-T-700/6
D2003-025	T2003-025	9.8	10.60			2	2			TUBE ASS'Y	6061-T6 0.500 OD x 0.035 W	WWW-T-700/6
D2003-027	T2003-027	7.25	(7.38) <i>OK</i>			2	2			TUBE ASS'Y	6061-T6 0.500 OD x 0.035 W	WWW-T-700/6
D2003-029	T2003-029	17.2	18.00			2	2			TUBE ASS'Y	6061-T6 0.500 OD x 0.035 W	WWW-T-700/6
D2003-031	T2003-031	14.6	15.38	2	2					TUBE ASS'Y	CRES 0.500 OD x 0.035 W	AISI 304
D2003-033	T2003-033	29.75	29.62	2	2					TUBE ASS'Y	CRES 0.500 OD x 0.035 W	AISI 304
D2003-035	T2003-035	24.7	27.00	2	2					TUBE ASS'Y	CRES 0.500 OD x 0.035 W	AISI 304
D2003-037	T2003-037	24.81	23.38	2	2					TUBE ASS'Y	CRES 0.500 OD x 0.035 W	AISI 304
D2003-039	T2003-039	34.0	34.00	2	2					TUBE ASS'Y	CRES 0.500 OD x 0.035 W	AISI 304
D2003-041	T2003-041	6.0	5.88	2	2					TUBE ASS'Y	CRES 0.500 OD x 0.035 W	AISI 304
D2003-043	T2003-043	11.7	10.75	2	2					TUBE ASS'Y	CRES 0.500 OD x 0.035 W	AISI 304
D2003-045	T2003-045	3.50	2.44	2	2					TUBE ASS'Y	CRES 0.500 OD x 0.035 W	AISI 304
D2003-047	T2003-047	5.56	5.56	2	2					TUBE ASS'Y	CRES 0.500 OD x 0.035 W	AISI 304
D2003-049	T2003-049	33.2	34.00	2	2					TUBE ASS'Y	CRES 0.500 OD x 0.035 W	AISI 304
D2003-077	T2003-077	N/A	6.25					1	1	JET	6061-T6 0.375 OD x 0.035 W	WWW-T-700/6
D2003-101	T2003-101	13.25	13.13					2	2	TUBE ASS'Y	6061-T6 0.375 OD x 0.035 W	WWW-T-600/6
D2003-103	T2003-103	12.38	12.00					2	2	TUBE ASS'Y	6061-T6 0.375 OD x 0.035 W	WWW-T-600/6
D2003-105	T2003-105	10.75	10.60					2	2	TUBE ASS'Y	6061-T6 0.375 OD x 0.035 W	WWW-T-600/6
D2003-107	T2003-107	12.75	12.25					2	2	TUBE ASS'Y	6061-T6 0.375 OD x 0.035 W	WWW-T-600/6
D2003-109	T2003-109	8.25	8.125			2	2			TUBE ASS'Y	6061-T6 0.500 OD x 0.035 W	WWW-T-600/6
D2003-111	T2003-111	4.75	4.625			2	2			TUBE ASS'Y	6061-T6 0.500 OD x 0.035 W	WWW-T-600/6
D2003-116	T2003-116	4.0								HEATSLEEVE	M2650-20 CRINKLE-SOFT	STRATOFLEX
D2003-120	T2003-120	4.0								HEATSLEEVE	M2650-16 CRINKLE-SOFT	STRATOFLEX
D2003-14	T2003-14	4.0								HEATSLEEVE	M2650-14 CRINKLE-SOFT	STRATOFLEX
D2003-16	T2003-16	4.0								HEATSLEEVE	M2650-16 CRINKLE-SOFT	STRATOFLEX
D2003-205	T2003-205	9.75	9.60					2	2	TUBE ASS'Y	6061-T6 0.375 OD x 0.035 W	WWW-T-700/6
D2003-207	T2003-207	3.75	3.75					2	2	TUBE ASS'Y	6061-T6 0.375 OD x 0.035 W	WWW-T-700/6

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WORK ORDER  
NO. 35324



DESIGN <i>[Signature]</i>	DRAWN BY <i>[Signature]</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D2003	REV. B SHEET 2 OF 2
DATE 99.06.08		TITLE 206 CABIN HEATER TUBE ASSEMBLIES	SCALE NTS

**RELEASED**  
99.06.08 KE

**UNDER REVIEW**

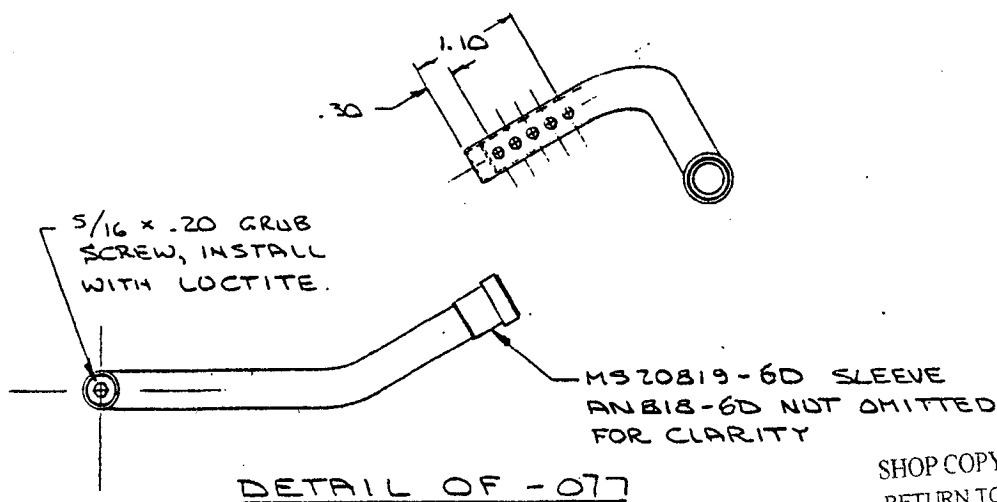
06.08.21 CB

Some flat lengths  
and wrong

67.10.24

**Notes:**

- (1) USE STRATOFLEX M2650-6 CRINKLE-SOFT HEATSLEEVE.
- (2) TUBING ASSEMBLIES TO BE CUT AND BENT IN ACCORDANCE WITH TEMPLATES.
- (3) TUBES TO BE FLARED 30° TO MATE WITH FITTINGS MADE TO MS33514.
- (4) ENSURE SEAMLESS TUBING IS USED.
- (5) INSTALL HEATSLEEVE OVER ALL TUBES WITH A DESIGNATED LENGTH OF HEATSLEEVE PER THE PARTS LIST.
- (6) 5052 (WW-T-700/4) TUBING MAY BE SUBSTITUTED WHEN 6061 TUBING IS NOT AVAILABLE.
- (7) 0.049 WALL THICKNESS CRES TUBING MAY BE SUBSTITUTED WHEN 0.035 IS NOT AVAILABLE.
- (8) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.



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